CLAIMS

1. Catalyst powder, comprising:

a porous carrier;

a noble metal particle which is partially buried in the porous carrier and carried in a state of being held by the carrier, the noble metal particle having a mean particle diameter of 1 to 10 nm; and

a transition metal particle in contact with both of the noble metal particle and the porous carrier.

2. The catalyst powder of claim 1,

wherein a part or whole of the transition metal particle forms a complex compound together with the carrier.

3. The catalyst powder of claim 1,

wherein a degree of dispersion of the noble metal carried on the carrier is 50% or more.

4. The catalyst powder of claim 1,

wherein the noble metal is at least one selected from platinum, palladium and rhodium,

the transition metal is at least one selected from manganese, iron, cobalt, nickel, copper and zinc, and

the carrier is a porous substance of at least one selected from alumina, ceria, zirconia, silica, titania and silica alumina.

5. The catalyst powder of claim 1, further comprising:

a compound composed of at least one selected from cerium, neodymium, praseodymium, lanthanum, zirconium, barium and magnesium.

6. A method of producing catalyst powder, comprising:

precipitating a noble metal particle and a porous carrier in a reversed micelle substantially simultaneously; and

precipitating a transition metal particle in the reversed micelle.

7. The method of producing catalyst powder of claim 6,

wherein the noble metal particle and the carrier are first precipitated, and then the transition metal particle is precipitated.

8. The method of producing catalyst powder of claim 6,

wherein the transition metal particle is first precipitated, and then the noble metal particle and the carrier are precipitated.

9. The method of producing catalyst powder of claim 6, further comprising:

decaying the reversed micelle;

filtering and cleaning a complex compound composed of the noble metal particle, the carrier and the transition metal particle, which are precipitated in the reversed micelle; and

drying and baking the complex compound.

10. A method of producing catalyst powder, comprising:

preparing a reversed micellar solution including a reversed micelle which contains an aqueous solution containing noble metal salt and an aqueous solution containing a carrier precursor;

mixing a precipitant into the reversed micellar solution in order to precipitate a noble metal particle and a carrier in the reversed micelle substantially simultaneously;

mixing an aqueous solution containing transition metal salt after the noble metal particle and the carrier are precipitated; and

mixing a precipitant into the reversed micellar solution in order to

precipitate a transition metal particle in the reversed micelle.

11. The method of producing catalyst powder of claim 10, further comprising:

decaying the reversed micelle;

filtering and cleaning a complex compound composed of the noble metal particle, the carrier and the transition metal particle, which are precipitated in the reversed micelle; and

drying and baking the complex compound.

12. A method of producing catalyst powder, comprising:

preparing a reversed micellar solution including a reversed micelle which contains an aqueous solution containing transition metal salt;

mixing a precipitant into the reversed micellar solution in order to precipitate a transition metal particle in the reversed micelle;

mixing an aqueous solution containing noble metal salt and an aqueous solution containing a carrier precursor after the transition metal particle is precipitated; and

mixing a precipitant into the reversed micellar solution in order to precipitate a noble metal particle and a carrier in the reversed micelle substantially simultaneously.

13. The method of producing catalyst powder of claim 12, further comprising:

decaying the reversed micelle;

filtering and cleaning a complex compound composed of the noble metal particle, the carrier and the transition metal particle, which are precipitated in the reversed micelle; and

drying and baking the complex compound.

14. An exhaust gas purifying catalyst, comprising:

catalyst powder including: a porous carrier; noble metal particles which are partially buried in the porous carrier, are carried in a state of being held by the carrier, and have a mean particle diameter of 1 to 10 nm; and transition metal particles in contact with both of the noble metal particles and the porous carrier,

wherein an amount of the noble metal is 0.7 g or less per 1 L of a volume of the exhaust gas purifying catalyst.